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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/690,656
Filing Date: October 22, 2003
Appellant(s): MUHONEN ET AL.

Andrew T. Spence
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/21/2010 appealing from the Office action mailed 11/24/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,130,908	PECUS ET AL	10-2006
6,157,982	DEO ET AL	12-2000
2005/0172326	JERDING ET AL	8-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

   (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 6, 7, 9, 11-13, 17-20, 24-29, 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecus et al (US Pat. 7,130,908), hereafter "Pecus," in view of Deo et al (US Pat. 6,157,982), hereafter "Deo."

3. As to claim 12, Pecus discloses an apparatus comprising a processor and memory storing executable instructions that in response to execution by the processor cause the apparatus to at least perform the following:

sending, to another apparatus located remote from the apparatus, a status of at least one piece of content stored in memory of the apparatus (column 22, lines 37-59, edge node (apparatus) responds to requests from NOC (other apparatus) with information related to the status of content stored at the edge node), each piece of content being associated with parameters including a client expiration time and a deletion priority value (column 17, lines 35-41, files stored on the edge node have expiration times and deletion indications (deletion priority value)),

receiving one or more instructions from the other apparatus based upon the status and the associated parameters to at least partially control storage of the at least one piece of content in memory of the apparatus (column 16, lines 7-17, NOC (network entity) sends messages to the edge nodes (terminal) to delete files and data).

But, Pecus does not explicitly disclose the received instructions at the apparatus, located remotely from the other apparatus, are based upon the client expiration time and the deletion priority value. Rather, Pecus discloses these steps are carried out by the edge node (reading on the apparatus), not the NOC (reading on the other apparatus), see column 17, lines 15-28. However, Pecus

does disclose that the NOC is functionally capable of sending instructions to the edge node, including delete instructions (column 22, lines 30-38).

However, Deo discloses sending one or more instructions from a processor to a remote terminal based upon the status of the content stored in memory to at least partially control storage at least one piece of content in memory of the terminal, said instruction including determining available memory capacity of the terminal and if said memory does not have sufficient storage capacity deleting content (column 3, lines 8-24, a computer (apparatus) remotely issues memory transactions (instructions) to a information device (terminal), those instructions being based upon the content of the information device's memory, and the computer (apparatus) determines how much space is available as it has a map of the device memory in its own memory).

Thus, the combined teachings of Pecus and Deo would yield a system in which the memory management method of Pecus executed by the edge node (i.e. determining what entries are expired and which are marked for deletion) would be carried out by the NOC. Due to the fact, that Deo discloses a system in which a remote device memory transactions are controlled by another, separate device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Pecus and Deo in order to decrease the processing burden of a terminal that has less processing power

available than a computer it is networked with (Deo, column 2, line 65-column 3, line 4).

4. As to claims 1, 19, 29, and 39, they are rejected by the same rationale set forth in claim 12's rejection.

5. As to claim 6, Pecus discloses the invention substantially with regard to the parent claim 1, and further discloses the apparatus configured to store at least one piece of content, wherein the parameters further include a server expiration time (column 17, lines 15-20), and wherein the memory stores executable instructions that in response to execution by the processor cause the apparatus to further perform sending at least one piece of content to the terminal (column 11, lines 40-50, NOC receives data and forwards it to the edge nodes).

6. As to claim 7, Pecus and Deo disclose the invention substantially with regard to the parent claim 6, and further disclose monitoring the server expiration time of the at least one piece of content in memory of the apparatus to determine when at least one piece of content has an exceeded server expiration time (Pecus, column 17, lines 15-28, expiration times may be relative to different clocks, e.g. system or network as recited on line 19-20), and when at least one piece of content has an exceeded server expiration time, deleting the at least one piece of content having an expired server expiration time (Pecus, column 17, lines 15-28).

7. As to claims 9, 11, 17, 26, and 36, Pecus discloses the processor is configured to associate each piece of content stored in the memory is associated with respective parameters (column 17, lines 20-28).

8. As to claims 13 and 20 Pecus discloses receiving one or more instructions comprises receiving one or more instructions to delete at least one piece of content based upon a comparison between the deletion priority value of each piece of content stored in memory (column 17, lines 11-14), to receive the one or more instructions being received when, based on a determination of when memory has sufficient storage capacity for at least one subsequent piece of content, the memory does not have sufficient storage capacity (column 17, lines 20-24, the data manager checks for files marked for forced deletion; i.e. a plurality of files' forced deletion flag is compared with the Boolean value “true” to determine if they should be deleted).

9. As to claims 18, 27, and 37, Pecus discloses the processor is configured set a deletion priority value for at least one piece of content (column 17, lines 20-28).

10. As to claims 24, Pecus discloses receiving at least one piece of content at the network entity; and sending at least one piece of content to the terminal such that

the terminal receives, and thereafter stores, the at least one piece of content (column 11, lines 40-50, NOC receives data and forwards it to the edge nodes).

11. As to claims 25, Pecus discloses the parameters further includes include a server expiration time (Pecus, column 17, lines 15-20), and wherein the method further comprises:

monitoring the server expiration time of the at least one piece of content in memory of the network entity to determine when at least one piece of content has an exceeded server expiration time (Pecus, column 17, lines 15-20); and

when at least one piece of content has an exceeded server expiration time, deleting the at least one piece of content having an expired server expiration time (Pecus, column 17, lines 15-20).

12. As to claims 28 and 38, Pecus discloses associating each piece of content comprises associating each piece of content stored in memory of the terminal with respective parameters at the network entity (column 17, lines 20-28).

13. As to claims 34, Pecus and Deo disclose the invention substantially with regard to the parent claim 30, and further disclose receiving at least one piece of content at the network entity; and sending at least one piece of content to the terminal such that the terminal receives, and thereafter stores, the at least one piece of

content (Pecus, column 11, lines 40-50, NOC receives data and forwards it to the edge nodes).

14. As to claim 35, it is rejected by a similar rationale to that set forth in claims 7's rejection.

15. Claims 2-5, 14-16, 21-23, and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecus in view of Deo in further view of Jerding et al (US Pub. No. 2005/0172326), hereafter "Jerding."

16. As to claims 2 and 30, Pecus and Deo disclose the invention substantially with regard to the parent claims 1 and 29, and Pecus further discloses determining when memory of the terminal has sufficient storage capacity for at least one subsequent piece of content (column 17, lines 11-14), and when memory does not have sufficient storage capacity deleting at least one piece of content based upon a comparison of the deletion priority values of a plurality of pieces of content stored in memory of the terminal (column 17, lines 20-24, the data manager checks for files marked for forced deletion; i.e. a plurality of files' forced deletion flag is compared with the Boolean value "true" to determine if they should be deleted).

But, Pecus fails to disclose that a processor, located remotely from the terminal, carrying out the determining and sending steps. Rather, Pecus

discloses these steps are carried out by the edge node (reading on the terminal), not the NOC (reading on the apparatus), see column 17, lines 1-10. However, Pecus does disclose that the NOC is functionally capable of sending instructions to the edge node, including delete instructions (column 22, lines 30-38).

However, Deo discloses sending one or more instructions from a processor to a remote terminal based upon the status of the content stored in memory to at least partially control storage at least one piece of content in memory of the terminal, said instruction including determining available memory capacity of the terminal and if said memory does not have sufficient storage capacity deleting content (column 3, lines 8-24, a computer (apparatus) remotely issues memory transactions (instructions) to a information device (terminal), those instructions being based upon the content of the information device's memory, and the computer (apparatus) determines how much space is available as it has a map of the device memory in its own memory).

Thus, the combined teachings of Pecus and Deo would yield a system in which the memory management method of Pecus executed by the edge node (i.e. determining what entries are expired and which are marked for deletion) would be carried out by the NOC. Due to the fact, that Deo discloses a system in which a remote device memory transactions are controlled by another, separate device.

But, neither Pecus nor Deo disclose the comparison *between* deletion priority values of pieces of content. Rather, Pecus discloses a comparing a marked for deletion flag with a Boolean value.

However, Jerding discloses a dynamic comparison between deletion priority values of a plurality of pieces of content stored in memory in order identify content that needs to be deleted in order to make room in memory for more content from a remote device ([0059]).

Because both Pecus and Jerding disclose methods of creating memory space for incoming data, it would have been obvious to one of ordinary skill in the art at the time of the invention substitute one method (i.e. Pecus's method, with forced deletion flags) for the other (i.e. Jeding's method, with dynamic comparisons of priority values of memory content) to achieve the predictable result of effectively creating memory space for incoming data (i.e. the end result both disclosures).

17. As to claim 3, Pecus, Deo, and Jerding disclose the invention substantially with regard to the parent claim 2, and further disclose determining a plurality of pieces of content having an exceeded client expiration time (Pecus, column 17, lines 15-20, "expired files" are identified), identifying a piece of content having a highest deletion priority value from a comparison between the deletion priority values (Jerding, [0059]) of the pieces of content having an exceeded client expiration time, the comparison excluding any piece of content without an exceeded client expiration time and sending one or more instructions instructing the terminal to

delete the identified piece of content (Pecus, column 17, lines 15-28, if files are both expired and have are marked for forced deletion, they will be deleted).

18. As to claim 4, Pecus, Deo, and Jerding disclose the invention substantially with regard to the parent claim 3, and further disclose the process is configured to repeatedly identify a piece of content, and send one or more instructions to instruct the terminal to delete the identified piece of content (Pecus, column 17, lines 15-28), until one of memory of the terminal has sufficient storage capacity for the at least one subsequent piece of content (Pecus, column 17, lines 15-28), or each piece of content having an exceeded client expiration time has been identified and deleted (Pecus, column 17, lines 15-28).

19. As to claim 5, Pecus, Deo, and Jerding disclose the invention substantially with regard to the parent claim 4, and further disclose when memory of the terminal does not have sufficient storage capacity for at least one subsequent piece of content and each piece of content having an exceeded client expiration time has been identified and deleted (Pecus, column 17, lines 15-28), the processor is further configured to identify at least one piece of content having a highest deletion priority value from a comparison between the deletion priority values of any pieces of content remaining in memory of the terminal (Jerding, [0059]), and send one or more instructions instructing the terminal to delete the identified at least one piece of content (Pecus, column 17, lines 15-28).

20. As to claims 14, 15, 21, 22, 31, and 32 they are rejected by a similar rationale to that set forth in claims 3 and 4's rejections.

21. As to claims 16, 23, and 33, they are rejected by a similar rationale to that set forth in claim 5's rejection.

(10) Response to Argument

The examiner summarizes the various points raised by the appellant and addresses replies individually.

(1) The appellant argues with respect to claim 1, 6, 7, 9, 11-13, 17-20, 24-29, and 34-39 that the combination of Pecus in view of Deo is improper because Pecus fails to disclose its terminal having less processing power, and therefore one of ordinary skill in the art would see no need to use the method disclosed in Deo.

In reply to **(1),** the examiner notes the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In regards to the combination of Pecus and Deo, the appellant has pointed to various exemplary embodiments of the Pecus disclosure to reach the conclusion that no where is it disclosed that there is a terminal with less processing power than an associated apparatus. This conclusion fails to appreciate what the teachings would have suggested to those of ordinary skill in the art. That is, Deo discloses shifting the processing burden of a terminal to a computer it is networked with (Deo, column 2, line 65-column 3, line 4) and one of ordinary skill in the art would appreciate that computer networks have a heterogeneous array of computers with varying processing powers (networks suggested by the Deo and Pecus teachings, i.e. not strictly limited to exemplary embodiments; further, never, even in the exemplary embodiments of the Pecus disclosure, would it suggest to one of ordinary skill that the terminal *must* have greater processing power than the associated apparatus, a conclusion the appellant has reached). Therefore, by combining Deo and Pecus, Pecus's system would be better suited if the end node had less processing power than the NOC.

Further still, it has been established that a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp and if this leads to anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. See recent Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 550 U.S.--, 82 USPQ2d 1385 (2007) for support of the above rationale (obvious to try, choosing from a finite number of predictable solutions). In this case, it would have been obvious to modify the

Pecus system so that the memory management method of Pecus could be executed by the edge node (i.e. determining what entries are expired and which are marked for deletion) would be carried out by the NOC for networks in which the processing power of NOC was greater than that of the edge node by utilizing the method taught by Deo.

Lastly, the examiner would further point out that no where in the claimed invention is the respective processing powers of the either the terminal or the apparatus relevant. That is, it is not a requirement of the claimed invention that the apparatus have more processing power than that of the terminal.

(2) The appellant argues with respect to claim 1, 6, 7, 9, 11-13, 17-20, 24-29, and 34-39 that the combination of Pecus in view of Deo is improper because Deo's solution leads away from the alleged combination. The appellant's further argues that when considering the Deo reference as a whole, the memory mapping features cannot ignored when considering "what the combined teachings of the references would have suggested to one skilled in the art," particularly when this feature enables the benefit of modifying Pecus per Deo stated by the examiner.

In reply to **(2),** the examiner notes, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the

combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In this particular case, the examiner's proposed combination would not have changed the principle operation of either of the Pecus (delivering multimedia content to internet users without degradation, see column 4, lines 55-61) or Deo (remotely managing memory in programmable portable information devices from external computers, see column 1, lines 7-12) disclosures, and therefore one of ordinary skill in the art would still have motivation to combine the teachings (elaborated on in paragraph 6 above, and the claim rejection below).

Further, the examiner is not ignoring the memory mapping features of the Deo reference in the combination, but rather relying on what would have been suggested to one of ordinary skill in the art given the combined teachings and reemphasizing the that the secondary reference need not be bodily incorporated into the structure of the primary reference, especially when simply considering exemplary embodiments of those references.

Further still, it has been established that a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp and if this leads to anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. See recent Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 550 U.S.--, 82 USPQ2d 1385 (2007) for support of the above rationale (obvious to try, choosing from a finite number of predictable solutions). In this case, it would have been obvious to modify the

Pecus system so that the memory management method of Pecus could be executed by the edge node (i.e. determining what entries are expired and which are marked for deletion) would be carried out by the NOC for networks in which the processing power of NOC was greater than that of the edge node by utilizing the method taught by Deo.

(3) The appellant argues with respect to claims 7, 25, and 35 that the combination of Pecus and Deo fail to disclose a server expiration time as recited in the claims.

In reply to **(3),** the examiner maintains Pecus discloses the processor is further configured to monitor the server expiration time of the at least one piece of content in memory of the apparatus to determine if at least one piece of content has an exceeded server expiration time (Pecus, column 17, lines 15-28, expiration times may be relative to different clocks, e.g. system or network as recited on line 19-20), and if at least one piece of content has an exceeded server expiration time, delete the at least one piece of content having an expired server expiration time (Pecus, column 17, lines 15-28).

Further, the claims recites, "a server expiration time" but at no point in the claims (7, 25, 35) or the parent claims is there any explicit sever recited (i.e., there is a server time, but what server in the system is it tied to? How does it relate to the terminal and apparatus?). Since, there is no explicit server to tie this time to; the claim can be broadly interpreted, thus allowing the teaching of Pecus to read on it.

Specifically, as Pecus discloses different system and network clocks (as explained above), comparison to such a clock may then read on a server expiration time.

(4) The appellant argues with respect to claims 3, 4, 14,15, 21, 22, 31, and 32, 30 that the combination of Pecus and Deo fails to disclose a determining content having an exceed client expiration time, and from that content, sending or receiving instructions to delete content having the highest deletion priority value from the comparison of the deletion priority values.

In reply to **(4),** the examiner maintains the combination of Pecus and Deo discloses, as substantially recited in the claims, determining a plurality of pieces of content having an exceeded client expiration time (Pecus, column 17, lines 15-20, “expired files" are identified), identifying a piece of content having a highest deletion priority value from a comparison of the deletion priority values of the pieces of content having an exceeded client expiration time (column 17, lines 20-24, the data manager checks for file(s) marked for forced deletion; i.e. a plurality of files' forced deletion flag is compared with the Boolean value “true” to determine if they should be deleted, “true” being the highest value for deletion priority; further, as all files are checked those that are expired will also be checked), and send one or more instructions instructing the terminal to delete the identified piece of content (Pecus, column 17, lines 15-28, if files are both expired and have are marked for forced deletion, they will be deleted).

Further, Pecus does teach a highest deletion priority value from a comparison of the deletion priority values of any pieces of content remaining in memory of the terminal as cited above, because as the value is either True ("1") or False (“0") the items with “1” (i.e. the highest) will be deleted.

(5) The appellant argues with respect to claims 5, 16, 23, and 33 that the combination of Pecus and Deo fails to disclose when memory of the terminal does not have sufficient storage capacity for at least one subsequent piece of content and each piece of content having an exceeded client expiration time has been identified and deleted, the processor is further configured to identify at least one piece of content having a highest deletion priority value from a comparison of the deletion priority values of any pieces of content remaining in memory of the terminal, and send one or more instructions instructing the terminal to delete the identified at least one piece of content.

In reply to **(5),** the examiner maintains Pecus and Deo disclose when memory of the terminal does not have sufficient storage capacity for at least one subsequent piece of content and each piece of content having an exceeded client expiration time has been identified and deleted (Pecus, column 17, lines 15-20, “expired files" are identified, if no files are expired they will not be deleted), the processor is further configured to identify at least one piece of content having a highest deletion priority value from a comparison of the deletion priority values of any pieces of content

remaining in memory of the terminal (column 17, lines 20-24, the data manager checks for file(s) marked for forced deletion; i.e. a plurality of files' forced deletion flag is compared with the Boolean value “true” to determine if they should be deleted, “true” being the highest value for deletion priority; this event occurs after the expired files are deleted), and send one or more instructions instructing the terminal to delete the identified at least one piece of content (Pecus, column 17, lines 15-28).

That is, in the scenario when there are no expired files or they have all been deleted, clearly those with the highest deletion priority (i.e. with a "1" or “True” value in the forced deletion parameter) will be deleted.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Thomas J. Dailey

/T. J. D./

Examiner, Art Unit 2452

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